Release notes for ENDF/B Development n-044_Ru_098 evaluation



April 26, 2017

- checkr Warnings:
 - 1. A previous error halted parsing of the current section MAT=4431, MF=1, MT=451 (1): Parsing stopped

ERROR(S) FOUND IN MAT=4431, MF= 1, MT=451
SECTION CANNOT BE CHECKED FROM SEQUENCE NUMBER 231 TO 288

- checkr Errors:
 - 1. A variable is outside the allowed ENDF range MAT=4431, MF=1, MT=451 (0): Variable range

ERROR(S) FOUND IN MAT=4431, MF= 1, MT=451
MOD = 1 OUT OF RANGE 0 - 0 RECORD NUMBER 231

2. Missing a section in directory so your directory is messed up. This error will break everything else MAT=4431, MF=2, MT=151 (0): Directory (b)

ERROR(S) FOUND IN MAT=4431, MF= 2, MT=151
SECTION 2/151 NOT IN DIRECTORY RECORD NUMBER 290

3. Missing a section in directory so your directory is messed up. This error will break everything else MAT=4431, MF=3, MT=1 (0): Directory (b)

ERROR(S) FOUND IN MAT=4431, MF= 3, MT= 1
SECTION 3/ 1 NOT IN DIRECTORY RECORD NUMBER 439

4. Missing a section in directory so your directory is messed up. This error will break everything else MAT=4431, MF=3, MT=2 (0): Directory (b)

ERROR(S) FOUND IN MAT=4431, MF= 3, MT= 2
SECTION 3/ 2 NOT IN DIRECTORY RECORD NUMBER 472

5. Missing a section in directory so your directory is messed up. This error will break everything else MAT=4431, MF=3, MT=4 (0): Directory (b)

ERROR(S) FOUND IN MAT=4431, MF= 3, MT= 4
SECTION 3/ 4 NOT IN DIRECTORY RECORD NUMBER 499

6. Missing a section in directory so your directory is messed up. This error will break everything else MAT=4431, MF=3, MT=16 (0): Directory (b)

ERROR(S) FOUND IN MAT=4431, MF= 3, MT= 16
SECTION 3/ 16 NOT IN DIRECTORY RECORD NUMBER 515

7. Missing a section in directory so your directory is messed up. This error will break everything else MAT=4431, MF=3, MT=17 (0): Directory (b)

ERROR(S) FOUND IN MAT=4431, MF= 3, MT= 17 SECTION 3/ 17 NOT IN DIRECTORY

RECORD NUMBER

8. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 4431, MF = 3, MT = 22 (0): Directory (b)

ERROR(S) FOUND IN MAT=4431, MF= 3, MT= 22 SECTION 3/ 22 NOT IN DIRECTORY

RECORD NUMBER 529

9. Missing a section in directory so your directory is messed up. This error will break everything else MAT = 4431, MF = 3, MT = 28 (0): Directory (b)

ERROR(S) FOUND IN MAT=4431, MF= 3, MT= 28

SECTION 3/ 28 NOT IN DIRECTORY

RECORD NUMBER 543

10. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 4431, MF = 3, MT = 32 (0): Directory (b)

ERROR(S) FOUND IN MAT=4431, MF= 3, MT= 32 SECTION 3/ 32 NOT IN DIRECTORY

RECORD NUMBER 554

11. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 4431, MF = 3, MT = 51 (0): Directory (b)

ERROR(S) FOUND IN MAT=4431, MF= 3, MT= 51 SECTION 3/51 NOT IN DIRECTORY

RECORD NUMBER

12. Missing a section in directory so your directory is messed up. This error will break everything else MAT = 4431, MF = 3, MT = 52 (0): Directory (b)

ERROR(S) FOUND IN MAT=4431, MF= 3, MT= 52 SECTION 3/ 52 NOT IN DIRECTORY

RECORD NUMBER 577

13. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 4431, MF = 3, MT = 53 (0): Directory (b)

ERROR(S) FOUND IN MAT=4431, MF= 3, MT= 53 SECTION 3/53 NOT IN DIRECTORY

RECORD NUMBER 591

14. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 4431, MF = 3, MT = 54 (0): Directory (b)

ERROR(S) FOUND IN MAT=4431, MF= 3, MT= 54 SECTION 3/54 NOT IN DIRECTORY

RECORD NUMBER 605

15. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 4431, MF = 3, MT = 55 (0): Directory (b)

ERROR(S) FOUND IN MAT=4431, MF= 3, MT= 55 SECTION 3/ 55 NOT IN DIRECTORY

RECORD NUMBER 619

16. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 4431, MF = 3, MT = 56 (0): Directory (b)

ERROR(S) FOUND IN MAT=4431, MF= 3, MT= 56 SECTION 3/ 56 NOT IN DIRECTORY

RECORD NUMBER 632

17. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 4431, MF = 3, MT = 57 (0): Directory (b)

ERROR(S) FOUND IN MAT=4431, MF= 3, MT= 57 SECTION 3/ 57 NOT IN DIRECTORY

RECORD NUMBER 644

18. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 4431, MF = 3, MT = 58 (0): Directory (b)

ERROR(S) FOUND IN MAT=4431, MF= 3, MT= 58 SECTION 3/ 58 NOT IN DIRECTORY

RECORD NUMBER 656

19. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 4431, MF = 3, MT = 59 (0): Directory (b)

ERROR(S) FOUND IN MAT=4431, MF= 3, MT= 59 SECTION 3/ 59 NOT IN DIRECTORY

RECORD NUMBER 667

20. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 4431, MF = 3, MT = 60 (0): Directory (b)

ERROR(S) FOUND IN MAT=4431, MF= 3, MT= 60 SECTION 3/ 60 NOT IN DIRECTORY

RECORD NUMBER 678

21. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 4431, MF = 3, MT = 61 (0): Directory (b)

ERROR(S) FOUND IN MAT=4431, MF= 3, MT= 61 SECTION 3/ 61 NOT IN DIRECTORY

RECORD NUMBER 689

22. Missing a section in directory so your directory is messed up. This error will break everything else MAT=4431, MF=3, MT=62 (0): Directory (b)

ERROR(S) FOUND IN MAT=4431, MF= 3, MT= 62 SECTION 3/ 62 NOT IN DIRECTORY

RECORD NUMBER 699

23. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 4431, MF = 3, MT = 63 (0): Directory (b)

ERROR(S) FOUND IN MAT=4431, MF= 3, MT= 63 SECTION 3/63 NOT IN DIRECTORY

RECORD NUMBER

24. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 4431, MF = 3, MT = 91 (0): Directory (b)

ERROR(S) FOUND IN MAT=4431, MF= 3, MT= 91 SECTION 3/ 91 NOT IN DIRECTORY

RECORD NUMBER 719

25. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 4431, MF = 3, MT = 102 (0): Directory (b)

ERROR(S) FOUND IN MAT=4431, MF= 3, MT=102 SECTION 3/102 NOT IN DIRECTORY

RECORD NUMBER 728

26. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 4431, MF = 3, MT = 103 (0): Directory (b)

ERROR(S) FOUND IN MAT=4431, MF= 3, MT=103 SECTION 3/103 NOT IN DIRECTORY

RECORD NUMBER 750

27. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 4431, MF = 3, MT = 104 (0): Directory (b)

ERROR(S) FOUND IN MAT=4431, MF= 3, MT=104 SECTION 3/104 NOT IN DIRECTORY

RECORD NUMBER 765

28. Missing a section in directory so your directory is messed up. This error will break everything else MAT = 4431, MF = 3, MT = 105 (0): Directory (b)

ERROR(S) FOUND IN MAT=4431, MF= 3, MT=105

SECTION 3/105 NOT IN DIRECTORY

RECORD NUMBER 777

29. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 4431, MF = 3, MT = 106 (0): Directory (b)

ERROR(S) FOUND IN MAT=4431, MF= 3, MT=106 SECTION 3/106 NOT IN DIRECTORY

RECORD NUMBER 787

30. Missing a section in directory so your directory is messed up. This error will break everything else MAT = 4431, MF = 3, MT = 107 (0): Directory (b)

ERROR(S) FOUND IN MAT=4431, MF= 3, MT=107 SECTION 3/107 NOT IN DIRECTORY

RECORD NUMBER 799

31. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 4431, MF = 3, MT = 111 (0): Directory (b)

ERROR(S) FOUND IN MAT=4431, MF= 3, MT=111 SECTION 3/111 NOT IN DIRECTORY

RECORD NUMBER 815

32. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 4431, MF = 4, MT = 2 (0): Directory (b)

ERROR(S) FOUND IN MAT=4431, MF= 4, MT= 2 SECTION 4/ 2 NOT IN DIRECTORY

RECORD NUMBER 827

33. Missing a section in directory so your directory is messed up. This error will break everything else MAT=4431, MF=4, MT=16 (0): Directory (b)

ERROR(S) FOUND IN MAT=4431, MF= 4, MT= 16 SECTION 4/ 16 NOT IN DIRECTORY

RECORD NUMBER 1009

34. Missing a section in directory so your directory is messed up. This error will break everything else MAT=4431, MF=4, MT=17 (0): Directory (b)

ERROR(S) FOUND IN MAT=4431, MF= 4, MT= 17 SECTION 4/ 17 NOT IN DIRECTORY

RECORD NUMBER 1020

35. Missing a section in directory so your directory is messed up. This error will break everything else MAT=4431, MF=4, MT=22 (0): Directory (b)

ERROR(S) FOUND IN MAT=4431, MF= 4, MT= 22 SECTION 4/ 22 NOT IN DIRECTORY

RECORD NUMBER 1031

36. Missing a section in directory so your directory is messed up. This error will break everything else MAT=4431, MF=4, MT=28 (0): Directory (b)

ERROR(S) FOUND IN MAT=4431, MF= 4, MT= 28 SECTION 4/ 28 NOT IN DIRECTORY

RECORD NUMBER 1042

37. Missing a section in directory so your directory is messed up. This error will break everything else MAT=4431, MF=4, MT=32 (0): Directory (b)

ERROR(S) FOUND IN MAT=4431, MF= 4, MT= 32 SECTION 4/ 32 NOT IN DIRECTORY

RECORD NUMBER 1053

38. Missing a section in directory so your directory is messed up. This error will break everything else MAT=4431, MF=4, MT=51 (0): Directory (b)

ERROR(S) FOUND IN MAT=4431, MF= 4, MT= 51 SECTION 4/ 51 NOT IN DIRECTORY

RECORD NUMBER 1064

39. Missing a section in directory so your directory is messed up. This error will break everything else MAT=4431, MF=4, MT=52 (0): Directory (b)

ERROR(S) FOUND IN MAT=4431, MF= 4, MT= 52 SECTION 4/ 52 NOT IN DIRECTORY

RECORD NUMBER 1181

40. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 4431, MF = 4, MT = 53 (0): Directory (b)

ERROR(S) FOUND IN MAT=4431, MF= 4, MT= 53 SECTION 4/ 53 NOT IN DIRECTORY

RECORD NUMBER 1204

41. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 4431, MF = 4, MT = 54 (0): Directory (b)

ERROR(S) FOUND IN MAT=4431, MF= 4, MT= 54 SECTION 4/ 54 NOT IN DIRECTORY

RECORD NUMBER 1227

42. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 4431, MF = 4, MT = 55 (0): Directory (b)

ERROR(S) FOUND IN MAT=4431, MF= 4, MT= 55 SECTION 4/ 55 NOT IN DIRECTORY

RECORD NUMBER 1250

43. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 4431, MF = 4, MT = 56 (0): Directory (b)

ERROR(S) FOUND IN MAT=4431, MF= 4, MT= 56 SECTION 4/ 56 NOT IN DIRECTORY

RECORD NUMBER 1273

44. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 4431, MF = 4, MT = 57 (0): Directory (b)

ERROR(S) FOUND IN MAT=4431, MF= 4, MT= 57 SECTION 4/ 57 NOT IN DIRECTORY

RECORD NUMBER 1296

45. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 4431, MF = 4, MT = 58 (0): Directory (b)

ERROR(S) FOUND IN MAT=4431, MF= 4, MT= 58 SECTION 4/ 58 NOT IN DIRECTORY

RECORD NUMBER 1319

46. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 4431, MF = 4, MT = 59 (0): Directory (b)

ERROR(S) FOUND IN MAT=4431, MF= 4, MT= 59 SECTION 4/ 59 NOT IN DIRECTORY

RECORD NUMBER 1342

47. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 4431, MF = 4, MT = 60 (0): Directory (b)

ERROR(S) FOUND IN MAT=4431, MF= 4, MT= 60 SECTION 4/ 60 NOT IN DIRECTORY

RECORD NUMBER 1365

48. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 4431, MF = 4, MT = 61 (0): Directory (b)

ERROR(S) FOUND IN MAT=4431, MF= 4, MT= 61 SECTION 4/ 61 NOT IN DIRECTORY

RECORD NUMBER 1388

49. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 4431, MF = 4, MT = 62 (0): Directory (b)

ERROR(S) FOUND IN MAT=4431, MF= 4, MT= 62 SECTION 4/ 62 NOT IN DIRECTORY

RECORD NUMBER 1411

50. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 4431, MF = 4, MT = 63 (0): Directory (b)

ERROR(S) FOUND IN MAT=4431, MF= 4, MT= 63 SECTION 4/ 63 NOT IN DIRECTORY

RECORD NUMBER 1434

51. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 4431, MF = 4, MT = 91 (0): Directory (b)

ERROR(S) FOUND IN MAT=4431, MF= 4, MT= 91 SECTION 4/ 91 NOT IN DIRECTORY

RECORD NUMBER 1457

52. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 4431, MF = 5, MT = 16 (0): Directory (b)

ERROR(S) FOUND IN MAT=4431, MF= 5, MT= 16 SECTION 5/ 16 NOT IN DIRECTORY

RECORD NUMBER 1481

53. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 4431, MF = 5, MT = 17 (0): Directory (b)

ERROR(S) FOUND IN MAT=4431, MF= 5, MT= 17 SECTION 5/ 17 NOT IN DIRECTORY

RECORD NUMBER 1528

54. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 4431, MF = 5, MT = 22 (0): Directory (b)

ERROR(S) FOUND IN MAT=4431, MF= 5, MT= 22 SECTION 5/ 22 NOT IN DIRECTORY

RECORD NUMBER 1544

55. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 4431, MF = 5, MT = 28 (0): Directory (b)

ERROR(S) FOUND IN MAT=4431, MF= 5, MT= 28 SECTION 5/ 28 NOT IN DIRECTORY

RECORD NUMBER 1749

56. Missing a section in directory so your directory is messed up. This error will break everything else

MAT = 4431, MF = 5, MT = 32 (0): Directory (b)

ERROR(S) FOUND IN MAT=4431, MF= 5, MT= 32 SECTION 5/ 32 NOT IN DIRECTORY

RECORD NUMBER 1837

57. Missing a section in directory so your directory is messed up. This error will break everything else MAT=4431, MF=5, MT=91 (0): Directory (b)

ERROR(S) FOUND IN MAT=4431, MF= 5, MT= 91 SECTION 5/ 91 NOT IN DIRECTORY

RECORD NUMBER 1871

- recent Warnings:
 - 1. Fission widths given for non-fissile nucleus, but are zero θ : Fission?

Calculate Cross Sections from Resonance Parameters (RECENT 2015-1)

Retrieval Criteria------ MAT

File 2 Mimimum Cross Section- 1.0000E-10 (Standard Option)

Reactions with No Background- Output (Resonance Contribution)
... [323 more lines]

- fudge-4.0 Warnings:
 - 1. Cross section does not match sum of linked reaction cross sections crossSectionSum label 0: total (Error # 0): CS Sum.

WARNING: Cross section does not match sum of linked reaction cross sections! Max diff: 0.97%

2. Cross section does not match sum of linked reaction cross sections $crossSectionSum\ label\ 1:\ (z,n)\ (Error\ \#\ 0):\ CS\ Sum.$

WARNING: Cross section does not match sum of linked reaction cross sections! Max diff: 0.13%

- fudge-4.0 Errors:
 - 1. Calculated and tabulated Q values disagree. reaction label 15: n[multiplicity:2'] + Ru97 (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: -10215230.74195862 eV vs -1.02321e7 eV!

2. Calculated and tabulated Q values disagree. reaction label 16: n/multiplicity:'3'] + Ru96 (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: -18326728.16714478 eV vs -1.83032e7 eV!

3. Calculated and tabulated Q values disagree. reaction label 17: n + H1 + Tc97 (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: -8325019.110366821 eV vs -8295640. eV!

4. Calculated and tabulated Q values disagree. reaction label 18: n + H2 + Tc96 (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: -15574623.76098633 eV vs -1.54646e7 eV!

5. Calculated and tabulated Q values disagree. reaction label 19: Ru99 + gamma (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: 7432137.737487793 eV vs 7465190. eV!

6. Calculated and tabulated Q values disagree. reaction label 20: n + He4 + Mo94 (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: -2271363.26222229 eV vs -2.2356e6 eV!

7. Calculated and tabulated Q values disagree.

reaction label 21: H1[multiplicity:'2'] + Mo97 (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: -7222338.189285278 eV vs -7192680. eV!

8. Calculated and tabulated Q values disagree. reaction label 22: H1 + Tc98-s (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: -1046037.969223022 eV vs -1009540. eV!

9. Calculated and tabulated Q values disagree. reaction label 23: H2 + Tc97_s (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: -6100453.009429932 eV vs -5985520. eV!

10. Calculated and tabulated Q values disagree. reaction label 24: H3 + Tc96-s (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: -9317390.820373535 eV vs -9279460. eV!

11. Calculated and tabulated Q values disagree. reaction label 25: He3 + Mo96_s (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: -6325558.130966187 eV vs -6286940. eV!

12. Calculated and tabulated Q values disagree. reaction label 26: He4 + Mo95_s (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: 5097738.064971924 eV vs 5.1403e6 eV!

• njoy2012 Warnings:

1. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!

groupr...compute self-shielded group-averaged cross-sections (0): GROUPR/conver (0)

---message from conver---cannot do complete particle production for mt= 16 only mf4/mf5 provided

2. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!

groupr...compute self-shielded group-averaged cross-sections (1): GROUPR/conver (0)

---message from conver---cannot do complete particle production for mt= 17 only mf4/mf5 provided

3. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!

groupr...compute self-shielded group-averaged cross-sections (2): GROUPR/conver (0)

---message from conver---cannot do complete particle production for mt= 22 only mf4/mf5 provided

4. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to good evaluators to improve things!

groupr...compute self-shielded group-averaged cross-sections (3): GROUPR/conver (0)

---message from conver---cannot do complete particle production for mt= 28 only mf4/mf5 provided

5. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!

groupr...compute self-shielded group-averaged cross-sections (4): GROUPR/conver (0)

---message from conver---cannot do complete particle production for mt= 32 only mf4/mf5 provided

6. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!

groupr...compute self-shielded group-averaged cross-sections (5): GROUPR/conver (0)

---message from conver---cannot do complete particle production for mt= 91 only mf4/mf5 provided